

AMENDMENTS TO THE CLAIMS

1. *(Currently amended)* An object tracking system comprising:
four or more sensors at different sites, each sensor being capable of detecting a signal from an object; and
a control device means for repeatedly, in response to the outputs of the sensors, selecting a sub-set of the sensors and determining the amount by which the times at which the sensors of the sub-set receive the signal are delayed with respect to each other to enable calculation of the current location of the object;
a processing device for processing an output from a first sensor of said sub-set in accordance with a signal representing the time at which predetermined events occur within an output from a second sensor of said sub-set, in order to determine the delay between the receipt of the signal by the first and second sensors; and
a device for forming a combination of segments of said output of said first sensor, the segments being staggered with respect to each other by intervals corresponding to the delays between the events in the output of the second sensor, and a determination device for determining said time delay from the position of a feature within said combination.
2. *(Currently Amended)* A system as claimed in claim 1, wherein the control device means is responsive to detecting that a parameter of a sensor output exceeds a predetermined detection threshold level for selecting said sub-set.
3. *(Currently Amended)* A system as claimed in claim 2, wherein the control device means is operable to determine whether a sensor belongs to said sub-set in dependence upon, at least, whether the sensor output exhibits a parameter which exceeds a second threshold level different from said first-mentioned threshold level.
4. *(Canceled)*

5. *(Currently Amended)* A system as claimed in claim 6~~claim 4~~, including a device means for forming a combination of segments of said output of said first sensor, the segments being staggered with respect to each other by intervals corresponding to the delays between the events in the output of the second sensor, and a determination device means for determining said time delay from the position of a feature within said combination.

6. *(Currently Amended)* An object tracking system comprising:

four or more sensors at different sites, each sensor being capable of detecting a signal from an object;

a control device for repeatedly, in response to the outputs of the sensors, selecting a sub-set of the sensors and determining the amount by which the times at which the sensors of the sub-set receive the signal are delayed with respect to each other to enable calculation of the current location of the object; and

a processing device for processing an output from a first sensor of said sub-set in accordance with a signal representing the time at which predetermined events occur within an output from a second sensor of said sub-set, in order to determine the delay between the receipt of the signal by the first and second sensors, ~~A system as claimed in claim 4 or claim 5,~~

wherein each said sensor forms part of a respective sensor device which is operable in a master mode to transmit data representative of the occurrence of said events, and in a slave mode to process the output of its sensor with received data representative of the occurrence of events in the output of another sensor in order to determine said time delay.

7. *(Currently Amended)* A system as claimed in claim 7~~6~~, wherein said control device means is operable to cause one of the sensor devices of the sub-set to operate in the master mode, and the other sensor devices of said sub-set to operate in the slave mode.

8. *(Cancelled)*

9. *(Cancelled)*

10. *(Cancelled)*

11. *(Currently Amended)* A system for determining the location of an object, the system comprising:

three or more sensors at different sites and each capable of producing a varying signal derived from an object in its field of view, and

a calculation device ~~means~~ for (a) deriving at least two time measurements each representing the difference in time between a signal produced by a respective one of the sensors and a similar signal produced by a different one of the sensors, and (b) ~~means~~ for calculating the location of the object in dependence upon the time measurements; wherein each time measurement is derived by: combining multiple segments of the signal from the respective

sensor, the segments being staggered by intervals which correspond to the intervals between predetermined events occurring in the signal generated by said different sensor, and determining the position within the combination of a predetermined feature.

12. *(Original)* A system as claimed in claim 11, wherein the predetermined events correspond to times at which the level of a sensor output increases above and decreases below a predetermined level, and wherein the said combination is formed by summing the samples.

13. *(New)* A system as claimed in claim 6, wherein the control device is responsive to detecting that a parameter of a sensor output exceeds a predetermined detection threshold level for selecting said sub-set.

14. *(New)* A system as claimed in claim 6, wherein the control device is operable to determine whether a sensor belongs to said sub-set in dependence upon, at least, whether the sensor output exhibits a parameter which exceeds a second threshold level different from said first-mentioned threshold level.